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EXAMINER	
MASINICK, MICHAEL D	
ART UNIT	**PAPER NUMBER**
2125	

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/813,340	DERSON ET AL.	
	Examiner	Art Unit	
	Michael D. Masinick	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/4/2004, 12/6/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-28 are pending in this application. This is the first office action on the merits.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

3. All independent claims contain the phrase "extending the length of the upstream processing station" and other independent and dependant claims contain phrases like "wherein the upstream station is returned to its original size". These phrases appear to be changing the physical nature of the upstream processing station. Examiner assumes that the intention of the applicant is to change the scheduling time allotted to the upstream processing station and not the physical nature of the processing station itself. This claim language should be changed in all claims to clarify the metes and bounds of the claims. This type of problem is prevalent in claims 4 and 5 as well. All claims are further treated as best understood by the examiner.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-28 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,088,045 to Shimanaka et al.

6. Referring to claim 1, Shiminaka shows Referring to independent claim 1, Shimanaka shows a method of controlling an assembly line, comprising the steps of: providing an article assembly line (Figure 2); designating, on the assembly line, an upstream processing station and a downstream processing station (Column 3, lines 30-51); delivering a first article to the upstream processing station (articles must be delivered to processing stations in any manufacturing plant); monitoring an upstream processing function on the first article within the upstream processing station (Column 2, lines 42-65); and if the upstream processing function on the first article is complete; advancing the first article downstream from the upstream processing station or the extended upstream processing station; advancing a second article to the upstream processing station.

7. Because of the way this claim is worded, all claim elements found in the "and if the upstream processing function in the upstream processing station is not completed" are not given patentable weight because this claim can be read upon by only having completed articles.

8. Obviously this is not what the applicant intends, so the USC 103 rejection below is given as an alternative rejection when all claim elements are taken into consideration. The claims should be reworded to ensure that all claim elements are required elements of the claimed process.

9. All other claims contain the same issues and are not further noted in this rejection. All dependant claims are addressed in the USC 103 rejection below.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,088,045 to Shimanaka et al in view of U.S. Patent No. 6,502,301 to Guner et al.

12. Referring to independent claim 1, Shimanaka shows a method of controlling an assembly line, comprising the steps of: providing an article assembly line (Figure 2); designating, on the assembly line, an upstream processing station and a downstream processing station (Column 3, lines 30-51); delivering a first article to the upstream processing station (articles must be delivered to processing stations in any manufacturing plant); monitoring an upstream processing function on the first article within the upstream processing station (Column 2, lines 42-65); and if, the upstream processing function in the upstream processing station on the first article is not complete: issuing a signal to an operator in the upstream processing station that the upstream processing function on the first article is not complete (Column 2, lines 55-59); monitoring the upstream processing function in the extended upstream processing station; and if the upstream processing function on the first article is not complete; associating a label with the first article for downstream remedial attention ("NG" – Column 2, lines 55-57); advancing the first article downstream from the extended upstream processing station (Column 3, lines 37-51); advancing a second article to the upstream processing station for the upstream processing function; and if the

upstream processing function on the first article is complete; advancing the first article downstream from the upstream processing station or the extended upstream processing station; advancing a second article to the upstream processing station.

13. Examiner notes that the advancing of a second article into the processing station would happen on any production line as the intent of a production line is to maximize the output by producing as many items as possible. Also, it is known in production line systems that when the processing of an article is completed, it is moved to the next station where the next step is performed.

14. Shimanaka does not show extending the length of the upstream processing station (noted above by examiner to mean the schedule for the station) to allow the upstream operator more time to complete the upstream processing function.

15. Guner shows a manufacturing scheduling system with the capabilities to adjust a schedule in small time periods to account for changes because of manufacturing problems or any other delays encountered in the manufacturing process ("lean manufacturing", Column 2).

16. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the scheduling modification techniques set forth in Guner to change the schedule of Shimanaka rather than sending the automobile to the next station incomplete because it would ensure that the work being done on the automobile is being done by those with the most expertise in the area of manufacture and also because "The operators are capable of achieving high levels of quality in connection with self-correcting alignment-based manufacturing operations" (Column 17, line 40 of Guner).

17. Referring to claim 2, Shimanaka shows wherein one or more steps of advancing the first article downstream includes the step of delivering the first article to the downstream processing station (Column 3, lines 48-50).

18. Referring to claim 3, Shimanaka shows the step of detecting the presence of the article in the upstream and/or downstream processing stations (Examiner notes that the messaging system present in Shimanaka moves the associated messages along with the workpiece and would alert the operators to the presence of the workpiece upon arrival by informing them of any problems or notes attached to the workpiece).

19. Referring to claim 4, Shimanaka shows wherein the extended upstream processing station at least partially overlaps the downstream processing station. Examiner notes that this claim is difficult to interpret in the current form, however, it should be noted that since it is impossible for the workpiece to be in two places at once, this claim must be interpreted as a scheduling overlap in paper form. The combination with Guner as shown above takes this into account and provides for the possibility of using some of the time previously allotted to another workstation to complete the task at the current workstation.

20. Referring to claim 5, please see explaination of reasoning with regard to claim 4.

21. Referring to claim 6, Shimanaka shows the step of issuing one or more signals to an operator in the upstream processing station and issuing one or more signals to an operator in the downstream processing station, the one or more signals indicating that the upstream processing function is not complete ("NG" as noted with regard to claim 1).

22. Referring to claim 7-9, Shimanaka shows wherein the same signal is issued to both the upstream and downstream operators (Shimanaka attaches a message to the workpiece using a digital system which is available to both station operators).

23. Referring to claim 10, Shimanaka shows wherein the extended upstream processing station is returned to its original size when the upstream processing function is either complete or when the first article is advanced downstream. Please note the examiners statements regarding claims 4 and 5. This also appears to be a scheduling statement with regard to paper forms and is not fully understood by the examiner.

24. Referring to claims 11-13, Shimanaka shows wherein the assembly line is a vehicle assembly line, the processing station is a torque theatre, and wherein the monitoring step includes counting the number of correct torque functions executed in the torque theatre (Results of the torque testing functions are shown in Figure 5).

25. Referring to claim 14, Shimanaka shows wherein the step of monitoring includes the steps of providing a torque tool and sensing the operation of the torque tool to determine when the torque tool is operating within a first set of predetermined conditions to register a correct torque function and to determine when the torque tool is operating within a second set of predetermined conditions to register an incorrect torque function (Column 9, lines 56-60).

26. Referring to claim 15, Shimanaka shows wherein the step of monitoring includes step of providing a map of torque targets to be hit during a predetermined torque sequence (Figure 3).

27. Referring to claim 16, Shimanaka shows wherein the step of monitoring includes the step of recording the location of the torque tool relative to the map, and storing the location of the torque tool and a predetermined torque condition of the torque tool at each location (Figure 5).

28. Regarding claims 17-21, all aspects of these claims have been shown with regard to claims 1-16.

29. Specifically regarding claim 18, the claim simply states that the process of claim 1 is done on two processing stations at the same time. This does not change the function of the claim itself and one of ordinary skill in the art would understand that you can run the process on any number of processing stations as required.

30. Referring to claim 22 and 26, Shimanaka shows wherein the second processing system is downstream from the first processing system (Figure 2).

31. Referring to claim 23 and 27, Shimanaka shows wherein the assembly line is operable to travel along a flow path a predetermined direction. Examiner notes that this is part of any assembly line.

32. Referring to claim 24 and 28, Shimanaka shows wherein the assembly line is operable to travel along a flow path in more than one predetermined direction (Column 10, lines 40-62).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael D. Masinick whose telephone number is (571) 272-3746. The examiner can normally be reached on Mon-Fri, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael D Masinick
Examiner
Art Unit 2125

MDM